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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,174	04/19/2004	Masayuki Yoshida	H 50019	2416

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HENKEL CORPORATION
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EXAMINER

TUROC, DAVID P

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/827,174

Applicant(s)

YOSHIDA ET AL.

Examiner

David Turocy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/23/2006 has been entered.

Response to Amendment

2. Applicant's amendments, filed 1/23/2006, have been fully considered and reviewed by the examiner. The examiner notes the amendments to claims 1, 13, and 21, the cancellation of claim 5, and the addition of new claim 22. Claims 1-4 and 6-22 are pending.

Response to Arguments

3. Applicant's arguments filed 1/23/2006 have been fully considered but they are not persuasive.

The applicant's argument with respect to the 35 USC 112 1st rejection of claim 22 have been considered and deemed persuasive and therefore the rejection has been withdrawn.

All other arguments are directed to newly added limitations and will be addressed in the rejection set forth below.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 13-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The phrase "in the absence of polymer different from (ii)" can be deemed new matter because the specification does not provide support for the negative limitation. Negative limitations recited to overcome prior art can be considered new matter. *Ex Parte Grasselli et al.* 231 USPQ 393. If the applicants can provide sufficient support for such a negative limitation from the original disclosure, then the examiner will withdraw the rejection. The necessary exclusion of a certain element will necessarily include any other element not excluded.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 13-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "in the absence of polymer different from (ii)" is unclear because it is unclear the metes and bounds of such a phrase. Limitation (ii) only requires a single polymer, and it is unclear if the limitation is requiring the absence of all polymers except polytetrafluoroethylene. For the purposes of applying art the examiner will interpret the claim to require only lubricant polymers.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1, 3-4, 6, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/64544 by Imai et al ("Imai") in view of Shreir et al.

Claim 1: Imai teaches of a applying a lubricant composition for plastic working of metals by first cleaning the metal, then contacting the metals with an aqueous lubricious film formation treating solution which contains at least one kind of inorganic salt and at least one kind of lubricant, and finally dried after application of lubricant (abstract, page 12, lines 31-36, Page 13 lines 6-8). Imai discloses the lubricant composition can be used as the lubricant that is employed during the cold plastic working e.g., wire drawing, pipe drawing, forging (Page 12, lines 25-28). Imai discloses an inorganic salt with a weight percent of 3%-8% and a lubricant weight percent of 3-5%, which is a weight ratio of lubricant to salt within the range of 0.375-1.67 (Table 2).

Imai fails to specifically teach cleaning the wire rod for 20 seconds or less. However, it is the examiners position that it is within the skill of one of ordinary skill in the art to determine the optimum value for a cleaning process. Fast enough for the process to produce an acceptable amount of cleanness in order to produce usable product, but not too slow as to cause an economic loss due to over cleaning. One of ordinary skill in the art at the time of the invention would recognize cleaning of metal prior to lubrication in cold plastic working requires a small amount of time. Therefore, it would have been obvious to one having ordinary skill in the art to have determined the

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optimum time of cleaning through routine experimentation. See *In re Aller*, USPQ 233 (CCPA 1955).

Imai also fails to suggest contacting the metal wire with a lubricant for 5 seconds or less. However, Imai discloses a lubricant composition that prefers a simple application process consisting of immersion or spraying (Column 2, lines 57-60). While the examiner acknowledges that the examples show an immersion time of Imai of 30 seconds, these showings are merely exemplary and are not limiting. It is the examiners position that it is within the skill of one of ordinary skill in the art to determine the suitable lubrication time to properly coat a metal in cold plastic working to provide sufficient lubrication for the process. Therefore, it would have been obvious to one having ordinary skill in the art to have determined the optimum lubrication time through routine experimentation in the absence of a showing of criticality. See *In re Aller*, USPQ 233 (CCPA 1955).

Imai discloses using steel substrates and removing oxide scale from the substrate prior to applying the lubricant, however, Imai fails to discloses cleaning using anodic or cathodic pickling.

However, Shreir, teaching of a method for removing oxides from the surface of the metal, discloses a known and suitable method for removing oxide from steel includes anodic or cathodic pickling (pg 12:6). The selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore it would have been obvious to one of ordinary skill in the art to modify

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Imai to remove the oxide using anodic or cathodic pickling because Shreir discloses that anodic or cathodic pickling is a known and suitable method for removing oxide from the surface of a metal and therefore one of ordinary skill in the art would expect to successfully remove oxides in the pretreatment process of Imai. Alternatively, Shreir discloses cathodic pickling allows for the removal of oxide from the surface of steel without any depletion of the steel and therefore it would have been obvious to one of ordinary skill in the art to have removed the oxide using cathodic pickling to reap the benefits of removing the scale without depleting the steel.

Claim 3: Imai teaches of at least one inorganic salt selected from the group consisting of phosphate, sulfate, borate, silicate, molybdate and tungstate (Page 8, lines 4-6).

Claim 4: Imai teaches of at least one kind of lubricant selected from the group consisting of metal soap, wax, polytetrafluoroethylene, molybdenum disulfate and graphite (Page 9, lines 4-19).

Claim 8: Imai discloses that a nonionic, anionic, amphoteric, and cationic surfactants can be added when a surfactant is required (Page 11, lines 13-15).

Claim 11: Imai discloses lubricant composition according to the present invention can be used as the lubricant that is employed during the cold plastic working (e.g., wire drawing, pipe drawing, forging) of metals such as iron, steel, copper, copper alloys, aluminum, aluminum alloys, titanium, and titanium alloys (Page 12, lines 25-28).

11. Claims 1-4, 6, 8-9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/64544 by Imai et al ("Imai") in view of US Patent 4688411 by Hagita et al ("Hagita") and further in view of Shreir et al.

Imai is applied here for the same reasons as applied above in the 35 USC 103(a) rejections. However, Imai fails to teach of a method for manufacturing a metal wire rod, having any diameter, using a continuous inline system comprising cleaning, by pickling, shot blasting or roll bending, preheating the metal rod, and contacting the metal wire with a lubricant for 5 seconds or less.

Claim 1: While it is the examiners position that it is within the skill of one of ordinary skill in the art to optimize the lubrication time as discussed above. Hagita is applied here to show known and conventional application times. Hagita teaches a method for preparation of the metal wire rod by continuous inline system comprising, carrying out cleaning treatment, contacting with aqueous lubricating film formation treating solution, and drying immediately and forming lubricious film (Figure 1, Column 4, lines 37-59). Hagita discloses a normal lubrication treatment time of 2-3 seconds (Column 6, lines 35-36). In addition, Hagita discloses carry out the wire drawing operation efficiently in a shorter period of time (Column 2, lines 46-48).

Claims 2: Hagita teaches a step of preheating the metal wire rod prior to contacting with the aqueous lubricating coating (Figure 1, Column 4, lines 37-59).

Claims 6: Hagita discloses a metal wire with a diameter of 5.5 mm (Column 8, Examples).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Imai to use the wire drawing process of cleaning, preheating, rinsing, lubricating, and drying suggested by Hagita to provide a desirable manufacture of metal wire rod for use in plastic working because Imai teaches a lubricant can be employed during cold plastic wire drawing but fails to disclose process parameters for such a process and Hagita teaches a known method for wire drawing.

Additionally Imai discloses using steel substrates and removing oxide scale from the substrate prior to applying the lubricant, however, Imai in view of Hagita fails to disclose cleaning using anodic or cathodic pickling.

However, Shreir, teaching of a method for removing oxides from the surface of the metal, discloses a known and suitable method for removing oxide from steel includes anodic or cathodic pickling (pg 12:6). The selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore it would have been obvious to one of ordinary skill in the art to modify Imai in view of Hagita to remove the oxide using anodic or cathodic pickling because Shreir discloses that anodic or cathodic pickling is a known and suitable method for removing oxide from the surface of a metal and therefore one of ordinary skill in the art would expect to successfully remove oxides in the pretreatment process of Imai in view of Hagita. Alternatively, Shreir discloses cathodic pickling allows for the removal of oxide from the surface of steel without any depletion of the steel and therefore it would

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have been obvious to one of ordinary skill in the art to have removed the oxide using cathodic pickling to reap the benefits of removing the scale without depleting the steel.

12. Claims 10, 13-14 and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/64544 by Imai et al ("Imai") in view of US Patent 4688411 by Hagita et al ("Hagita").

Imai is applied here for the same reasons as applied above in the 35 USC 103(a) rejections. However, Imai fails to teach of a method for manufacturing a metal wire rod, having any diameter, using a continuous inline system comprising cleaning, by pickling, shot blasting or roll bending, preheating the metal rod, and contacting the metal wire with a lubricant for 5 seconds or less.

Claim 1: While it is the examiners position that it is within the skill of one of ordinary skill in the art to optimize the lubrication time as discussed above. Hagita is applied here to show known and conventional application times. Hagita teaches a method for preparation of the metal wire rod by continuous inline system comprising, carrying out cleaning treatment, contacting with aqueous lubricating film formation treating solution, and drying immediately and forming lubricious film (Figure 1, Column 4, lines 37-59). Hagita discloses a normal lubrication treatment time of 2-3 seconds (Column 6, lines 35-36). In addition, Hagita discloses carry out the wire drawing operation efficiently in a shorter period of time (Column 2, lines 46-48). Hagita teaches a

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step of preheating the metal wire rod prior to contacting with the aqueous lubricating coating (Figure 1, Column 4, lines 37-59).

Claims 6 and 14: Hagita discloses a metal wire with a diameter of 5.5 mm (Column 8, Examples).

Claims 10 and 19: Hagita discloses the method of descaling the wire during an in-line process can be accomplished by any of pickling, shot blasting and roll bending (Column 4, lines 60-65).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Imai to use the wire drawing process of cleaning, preheating, rinsing, lubricating, and drying suggested by Hagita to provide a desirable manufacture of metal wire rod for use in plastic working because Imai teaches a lubricant can be employed during cold plastic wire drawing but fails to disclose process parameters for such a process and Hagita teaches a known method for wire drawing.

13. Claims 7, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/64544 by Imai et al ("Imai") taken in view of US Patent 4688411 by Hagita et al ("Hagita") alone or in view of Shrier when further taken in view of US Patent 5282377 by Illig et al ("Illig").

Imai, Hagita, and Shrier are applied for the same reasons set forth in the 35 USC 103 (a) rejection above. Hagita discloses a wire drawing speed of 80 m/mm (Column 9, line 2). It is the examiners position that the units of m/mm appear to be a typographical

error. The examiner believes the units are more reasonably m/min. The examiner believes that a fair suggestion of this reference to one of ordinary skill in the art would be m/min. It is within the skill of one of ordinary art at the time of the invention to regard the line drawing speed of 80 m/mm to be 80 m/min, because it is within the skill of one of ordinary skill in the art that speed has units of length/time.

While the examiner maintains his position that m/mm is really m/min, Illig has been applied to disclose known wire drawing speeds. Illig, teaching of a similar method for applying a lubricant during a wiring drawing process, discloses line speed of 35 m/min to 75m/min (Column 6, lines 66-67). Illig also discloses that the wire line speed is a cause effective variable with respect to the weight of the lubricant applied (Column 6, lines 58-62, Figure 5). Therefore, since wire drawing speeds are known in the art to be in the order of 75 m/min, one of ordinary skill in the art would consider a wire drawing speed of 80 m/mm to more reasonably be 80 m/min.

14. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/64544 by Imai et al ("Imai").

Claim 21: Imai teaches of a applying a lubricant composition for plastic working of metals by first cleaning the metal, then contacting the metals with an aqueous lubricious film formation treating solution which contains at least one kind of inorganic salt and at least one kind of lubricant, and finally dried after application of lubricant (abstract, page 12, lines 31-36, Page 13 lines 6-8). Imai discloses the lubricant composition can be used as the lubricant that is employed during the cold plastic

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working e.g., wire drawing, pipe drawing, forging (Page 12, lines 25-28). Imai discloses an inorganic salt with a weight percent of 3%-8% and a lubricant weight percent of 3-5%, which is a weight ratio of lubricant to salt within the range of 0.375-1.67 (Table 2). Imai teaches of at least one inorganic salt selected from the group consisting of phosphate, sulfate, borate, silicate, molybdate and tungstate (Page 8, lines 4-6). Imai teaches of at least one kind of lubricant selected from the group consisting of metal soap, wax, polytetrafluoroethylene, molybdenum disulfate and graphite (Page 9, lines 4-19). See for example Table 2, comparative example number 5, which discloses a composition consisting of the sodium tungstate and polyethylene wax as a lubricant (weight Ratio of 1.2). While the examiner notes, Imai discloses comparative example 5 as a non-desired disclosure, Imai clearly discloses such a composition is operable, as evidenced by the test results. While the values in the test result are reduced without the addition of the resin, Imai does discloses such a situation, while not desired, is still operable and therefore does not teach away from the instant claims.

Claim 22: Imai discloses a solid matter ratio within the range as claimed, see for example Table 2, comparative example number 5, with a solid matter concentration is 8 weight percent.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 4350034 discloses operability of a metal drawing composition consisting of a borate and metal soaps.

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16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Turocy
AU 1762



TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER